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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# ReSpeaker Core V2 – high performance voice interactive solution

## Product Overview

Seeed's ReSpeaker Core v2 is designed for voice interactive applications. It based on quad-core ARM Cortex-A7, up to 1.5Ghz, and 1GB RAM on-board. Besides, it features six microphone array with necessary speech algorithm, like DoA(Direction of arrival), BF(Beam-Forming), AEC(Acoustic echo cancellation) and etc.

ReSpeaker Core v2 runs GNU/Linux operation system. It benefits from powerful and active community, we can use lot of existing software/tools for development, testing and deploy, so that rapid product development become available.

ReSpeaker Core v2 is not only designed for makers/enthusiast, but also a turnkey solution for business company. The hardware consists of two parts, one is the minimized SoC module which is small and easy to manufacturing and ready for final product. Another is a bottom board can be full customizable.

## Key Benefits

- Debian-based Linux system
- SDK for speech algorithm with Full documents
- C++ SDK and Python wrapper
- Speech algorithms and features
  - Keyword wake-up
  - BF(Beam-Forming)
  - DoA(Direction of arrival)
  - NS(Noise suppression)
  - AEC(Acoustic echo cancellation) and AGC(Automatic gain control)
- All-in-one solution with high performance SoC
- 8 channel ADCs for 6 microphone array and 2 loopback(hardware loopback)

## Hardware Features

- ARM Quad-core Cortex-A7 up to 1.5GHz
- ARM Mail-400MP2 GPU
- 1GB RAM DDR3
- Audio and Video
  - 8 channel ADCs for 6 microphone array and 2 loopback
  - 3.5mm audio headset connector
  - JST 2.0 output connector for 8 Ohm Speaker
  - HDMI 2.0\*
- Connectivity:
  - WiFi b/g/n
  - Bluetooth 4.0 and Low Energy dual-mode
  - Ethernet
- Storage
  - 4GB eMMC on-board
  - SD card slot
- Peripheral
  - 1 x USB Host/OTG
  - 1 x USB power
  - 1 x Grove socket, support I2C and digital port
  - 6 x GPIO
  - 1 x UART
  - 12 x programmable LEDs

## Applications

- Smart speaker
- Intelligent voice assistant systems
- Voice recorders
- Voice conferencing system
- Meeting communicating equipment
- Voice interacting robot
- Car voice assistant
- Other scenarios need voice command



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